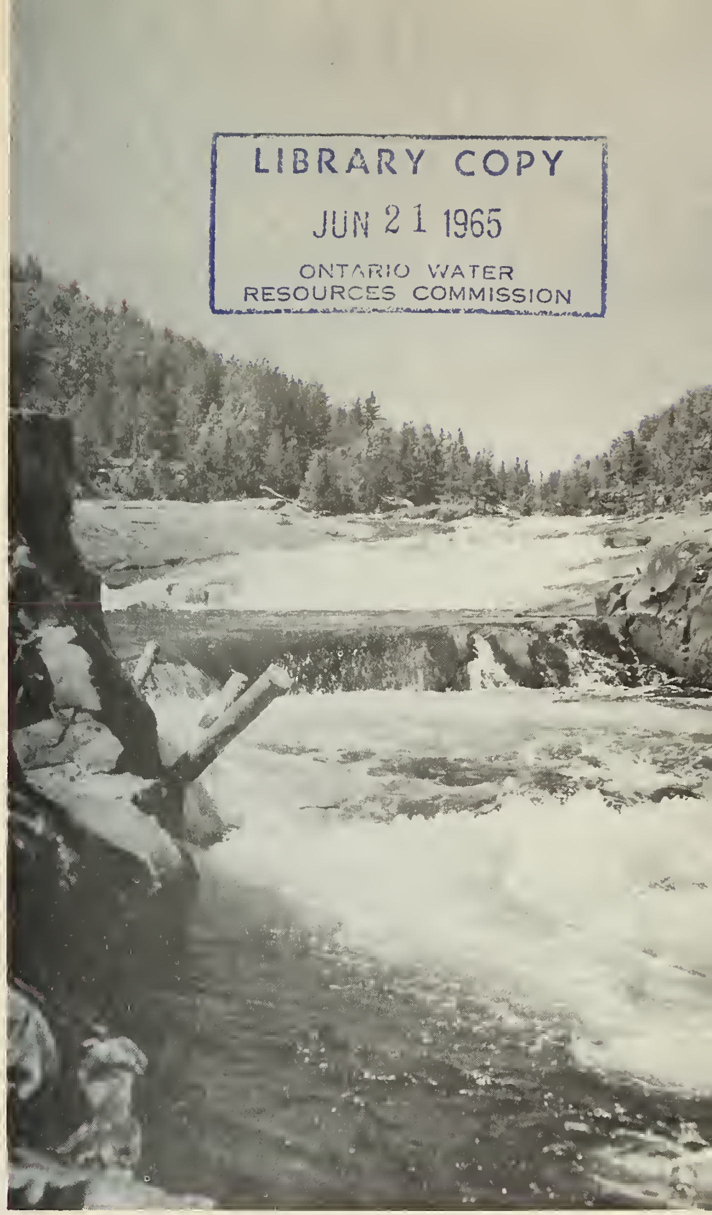
# Burlington (ELIZABETH GARDENS)

# Water Pollution Control Plant

LIBRARY COPY
JUN 21 1965
ONTARIO WATER
RESOURCES COMMISSION



## 1963 Annual Report

ONTARIO MINISTRY OF ENVIRONMENT
36936000023743

TD
367
.A56
B875
1963
MOE

Ontario Water Resources Commission

TD
367
.A56
B875
1963

Burlington Elizabeth Gardens :
water pollution control plant.
81567

ONTARIO WATER RESOURCES COMMISSION
OFFICE OF THE GENERAL MANAGER

Members of the Burlington Elizabeth Gardens
Water Pollution Control Plant
Local Advisory Committee.

Gentlemen:

I am pleased to submit, for your information, the 1963 Annual Operating Report of the Burlington Elizabeth Gardens Water Pollution Control Plant, OWRC Project 58-S-28, which has been prepared by our Division of Plant Operations.

We are grateful for the kind cooperation which you and your staff have extended to our Operations staff throughout the year. We look forward to a continuing close association with you in our mutual endeavour to control pollution.

Yours very truly,

D S Caverly

D. S. Caverly,
General Manager.

Environment Ontario
Laboratory Library
125 Resources Rd.
Etobicoke, Ontario M9P 3V6
Canada

Digitized by the Internet Archive
in 2015

https://archive.org/details/burlingtonelizab23743

TD
224
C27
E42

A515

General Manager,
Ontario Water Resources Commission.

Dear Sir:

It is with pleasure that I present to you the Annual Report of the operation of the Burlington Elizabeth Gardens Water Pollution Control Plant, OWRC Project No. 58-S-28 for 1963.

This report presents design data, outlines operating problems encountered and summarizes in tables, charts and graphs all significant flow and cost data.

Yours very truly,

BC Palmer

B. C. Palmer,
Director,
Division of Plant Operations

# *foreword*

This report is designed to present the highlights of the operation of these works during 1963. Trends in flows and other operating data can be extremely useful in the development of necessary long range enlargement and improvement programs.

In addition to the activities reported herein, much unrecorded effort has contributed to the success of this operation. The municipality, through representatives on the Local Advisory Committee, has given valuable assistance in reviewing salary schedules, detailed operating budgets, personnel problems, flow patterns, and major maintenance problems.

The Division of Plant Operations has provided direction to the field staff in administrative procedures, quality control, maintenance schedules, equipment inspection and purchase supervision. A number of other Divisions of the Commission have been of service. The Division of Construction has offered helpful advice on equipment selection and renovation problems. The Division of Sanitary Engineering has maintained, through its District Engineering staff, a keen interest in the operation and has made a number of constructive recommendations. Its operator training courses have been very helpful. The Division of Finance has processed many payrolls, purchase orders and invoices dealing directly with this project. The Commission Personnel Director has been most helpful in the selection of new staff.

The excellent cooperation of all of these groups is gratefully acknowledged.

B C Palmer

B. C. Palmer,
Director,
Division of Plant Operations

ONTARIO WATER RESOURCES COMMISSION

**DIVISION OF PLANT OPERATIONS**

## contents

Foreword.................. Page 1
Title Page.................. Page 2
History..................... Page 3
Project Staff............... Page 4
Description of Project........ Page 5
Design Data................. Page 7
Plant Flow Chart............ Page 8
Process Data............... Page 9
Operating Costs............. Page 19
Summary................... Page 21
Total Costs........ Inside back cover

C. W. Perry
Assistant Director
D. McTavish
Regional Supervisor
B. G. Porter
Operations Engineer

# BURLINGTON ELIZABETH GARDENS WATER POLLUTION CONTROL PLANT

OPERATED FOR

THE TOWN OF BURLINGTON

BY

THE ONTARIO WATER RESOURCES COMMISSION

CHAIRMAN

A. M. Snider

COMMISSIONERS

W. D. Conklin, Q.C.
J. H. H. Root, M.P.P.
J. A. Vance, LL. D.
A. A. Wishart, Q.C., M.P.P.

GENERAL MANAGER

D. S. Caverly

ASSISTANT GENERAL MANAGERS

G. M. Galimbert
L. E. Owers

COMMISSION SECRETARY

W. S. MacDonnell

# 1958 to 1963 History

## INCEPTION

In April 1958, the Town of Burlington and the Ontario Water Resources Commission initiated plans for the expansion of an existing primary treatment plant into a modern water pollution control plant.

The firm of Proctor and Redfern, Toronto Ontario, Consulting Engineers, was engaged to prepare plans and specifications for the project.

## APPROVAL

In December 1958, the Town signed an agreement with the Ontario Water Resources Commission to finance, construct, and operate the expanded plant.

## CONSTRUCTION

Halco Construction Company and Schwenger Construction Limited, began construction in June 1959, and the Division of Plant Operations took over the operation in May 1960.

## TOTAL COST

The total cost of the project was $383,373.39.

# Project Staff

| Chief Operator | Operator |
|---|---|
| G. Stinson | L. Hordyk |

Both Mr. Stinson and Mr. Hordyk have been employed at the Elizabeth Gardens plant since its start up. They have shown considerable skill and knowledge in operating this plant. Both men received their Certificates of Qualification as Water Pollution Control Plant Operators in 1963 from the Ontario Water Resources Commission courses held at the laboratory in Toronto.

In recognition of their abilities, both men received a promotion in December 1963. Mr. G. Stinson was made Senior Operator of the Burlington Drury Lane Water Pollution Control Plant and Mr. L. Hordyk was made Senior Operator of the Elizabeth Gardens Water Pollution Control Plant.

Since December 1963, the three Burlington plants have been operated as an intergrated system, with C. Fiddy as Superintendent of the three plants.

The plant is normally supervised eight hours per day with exception of the weekend, when only four hours per day is supplied.

# Description of Project

## INFLUENT WORKS

The sewage enters the plant's sewage pump wet well through a 33 inch diameter and a 24 inch diameter sewer. From there, the sewage is pumped to the influent works. It is first screened through a barminutor which traps, cuts and grinds the larger solids, from there the sewage passes to the air degritter which removes heavy solids and then through the parshall flume, where the flow is measured. It is possible to by-pass both the barminutor and the grit chamber.

In the air degritter the "grit", high density solids, is settled by keeping the velocity of the sewage at one foot per second using an air diffuser. This allows the heavy solids to settle while the lighter solids remain in suspension. The town forces dispose of the grit in the town dump.

## PRIMARY CLARIFIERS

The sewage flow is divided between two primary clarifiers. Approximately 50% of the suspended solids of the incoming sewage settle to the bottom of the clarifiers. Each clarifier is equipped with a circular sludge collector, which moves the settled sludge to a hopper, located at the bottom of the clarifier. The sludge is then pumped to a digestion tank.

## AERATION

Settled sewage from the primary clairifiers flows by gravity to two single pass aeration tanks. There it is mixed with activated sludge, which has been returned from the final clarifiers, and aerated. There are two single pass aeration tanks each 19' 6" x 98' x 12'. The detention time is six hours with 25% return sludge at design flow.

Air is supplied by two blowers each supplying 750 cu.ft. per min. at 8.5 psi, with 100% stand-by. The blowers are driven by 40 hp motors.

## SLUDGE DIGESTION TANK

The Elizabeth Gardens plant operates one digester, 45 feet in diameter and 20 feet deep. Sludge is pumped from the primary clarifier to the digester. The roof is a fixed steel cover and the sludge is mixed by a single draft tube mixer. The sludge is heated through a hot water heat exchanger. Digested liquid sludge is hauled by tank truck.

## FINAL CLARIFIER

The aerated mixed liquor from the aeration section is retained in the single final clarifier for 2.2 hours at design flow. This allows the activated sludge to settle and it is collected in the bottom of the tanks and returned to the aeration section or wasted. (Excess activated sludge is wasted to the primary clarifiers, where it settles and is pumped to the digester). The remaining liquid flows over the weirs of the final clarifier and is chlorinated in the chlorine contact chamber before discharged as final effluent to Lake Ontario.

# Design—Data

## GENERAL

Type of Plant: Activated Sludge

Design Population: 7500 persons

Per Capita Flow: 100 gals/cap/day

Design Plant Flow: 750,000 gals/day

Raw Sewage (for design purposes)

5 day B.O.D. - 253 p.p.m. Est. Removal - 90-95%
Susp. Solids - 280 p.p.m. Est. Removal - 95%

## PRIMARY TREATMENT

- Screening - Barminutor - Chicago Pump Co.
  Model B - Size 18
- Grit Removed - Air degritter 8' x 14' x 7' Average Depth.
  - Retention Period 10 min.
  - 4 Colaflex Diffusers
- Primary Settling - 2 Dorr Clarifiers - one existing
  New one 22'0 x 9' S.W.D.
  Central Feed - mechanically cleaned
  Retention Period (Total) 2 hours
  Surface Settling Rate - 980 gal/sq.ft. tank/day.
  Overflow Rate - 5430 gals/ft. weir/day.

## SECONDARY TREATMENT

- Aeration - 2 tanks - each 19'6" x 98' x 12' W.D.
- Total Volume = 44,000 cu.ft.
- Retention Period - 6 hours with 25% return sludge
- Diffuser System - 60" "Colaflex" Diffusers per tank
- Compressors
- Air Supply - 1.2 cu.ft/gal + 100% Standby

Aeration Tanks designed on loading of 25# B.O.D. /100# of sludge solids and return on sludge to have a mohlman index of 250.

FINAL SEDIMENTATION - 2 Units - each 40' x 40' x 10' S.W.D.
Dorr Mechanism

- Retention Period - 2.2 hours including return Sludge (Marginal) (5/4 Q)
- Surface Settling Rate 470 gals/sq.ft./day (on Q)
- Overflow Rate - 4690 gals/ft weir/day (on Q)

CHLORINATION - Max. capacity of chlorinator 200#/24 hrs.

Contact Chamber - to use existing chamber
Contact time - 10 min + outfall sewer

SLUDGE DISPOSAL

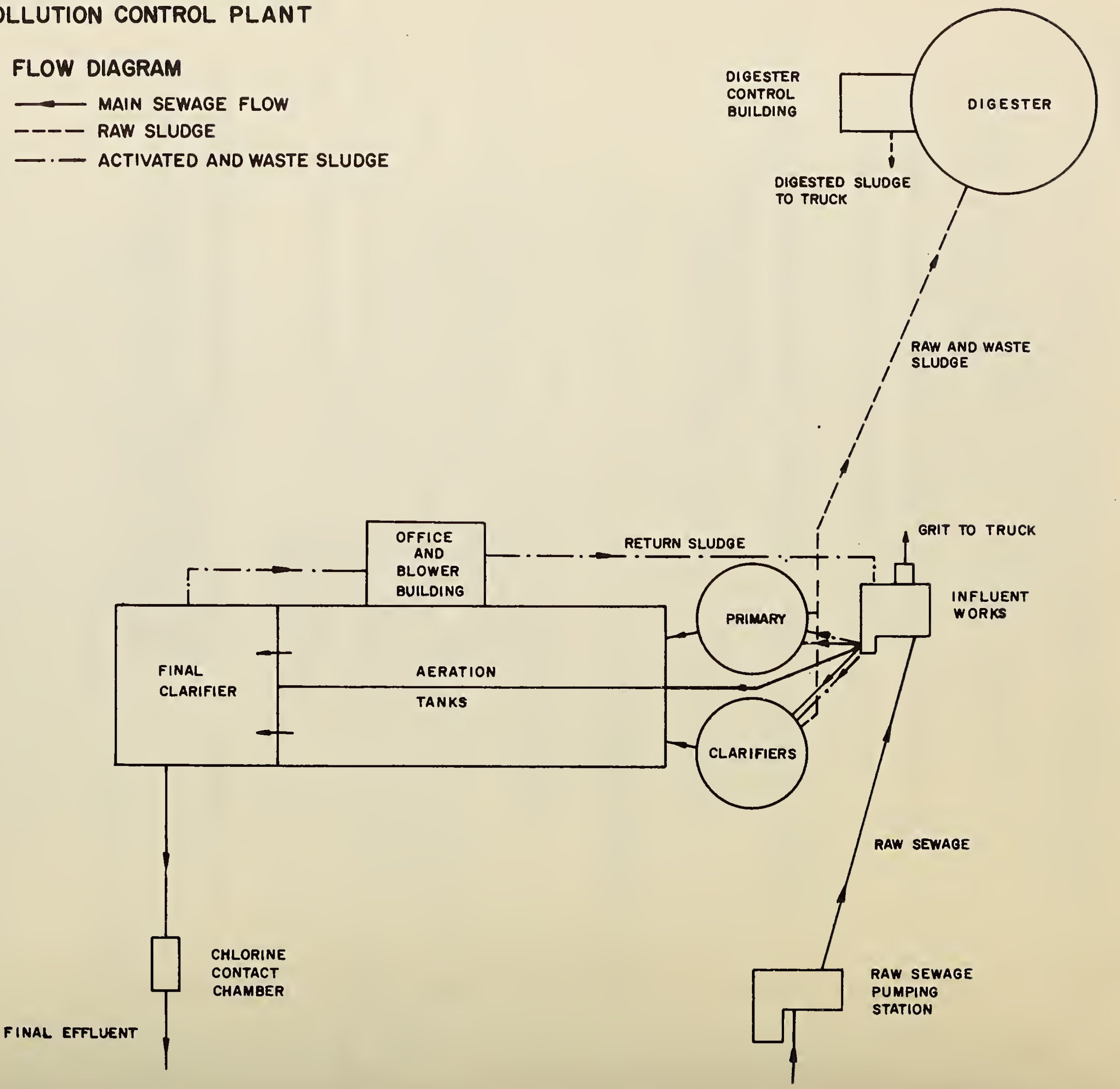
Heated digester - 45' ø x 20' S.W.D.

- Walker gas oil unit rated at 250,000 BTU's per hour.
- Digester Capacity - 4.2 cu.ft./capita
- Loading - 1.6 lbs/ solids/cu.ft. tank/mon.
- Final disposal of liquid sludge by tank truck to farms.

Other Notes:
- Sludge return is by pumps with Chicago Pump splitter box.
- Influent works for existing plant will not be changed.

# BURLINGTON ELIZABETH GARDENS WATER POLLUTION CONTROL PLANT

## FLOW DIAGRAM

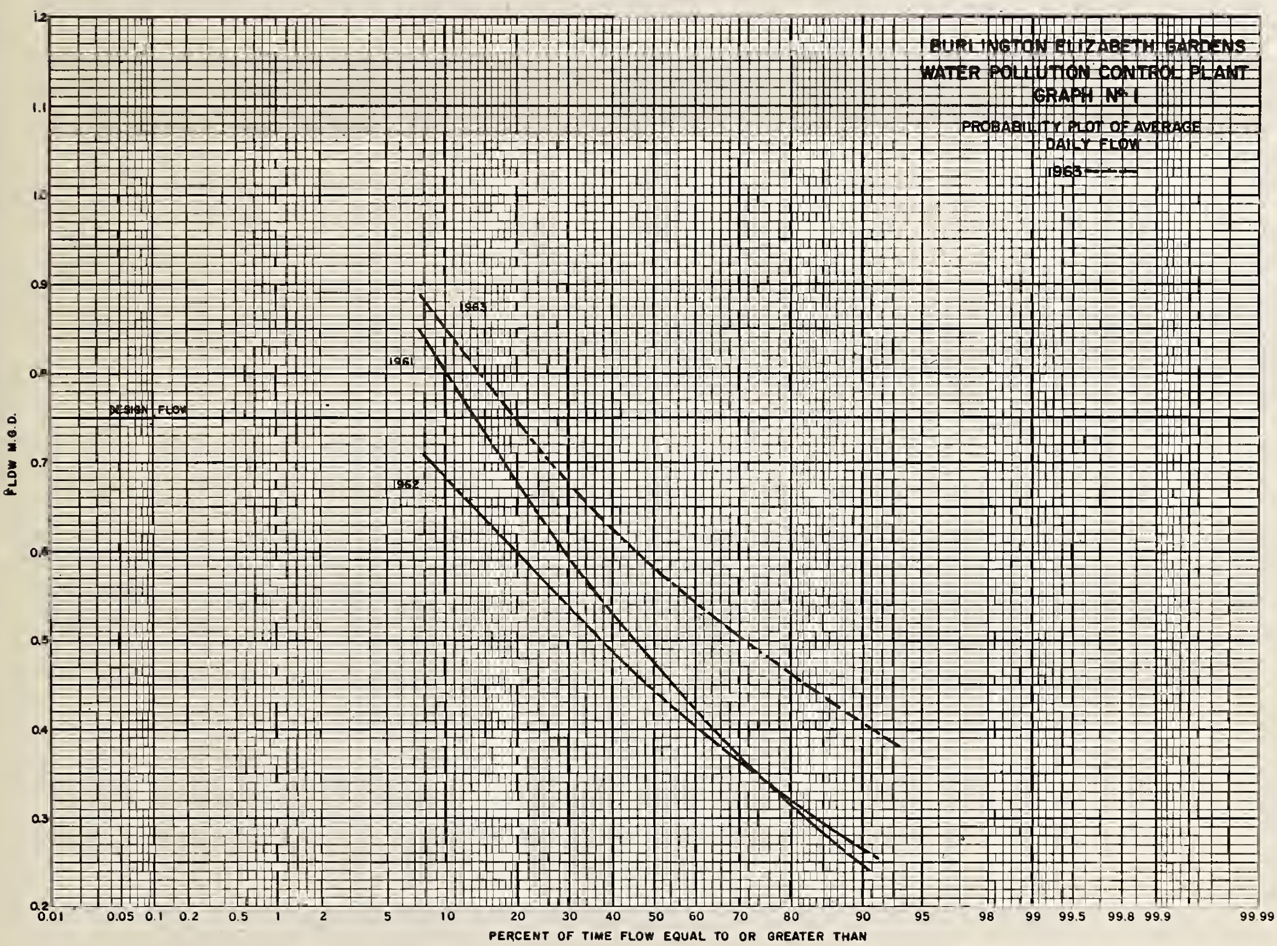


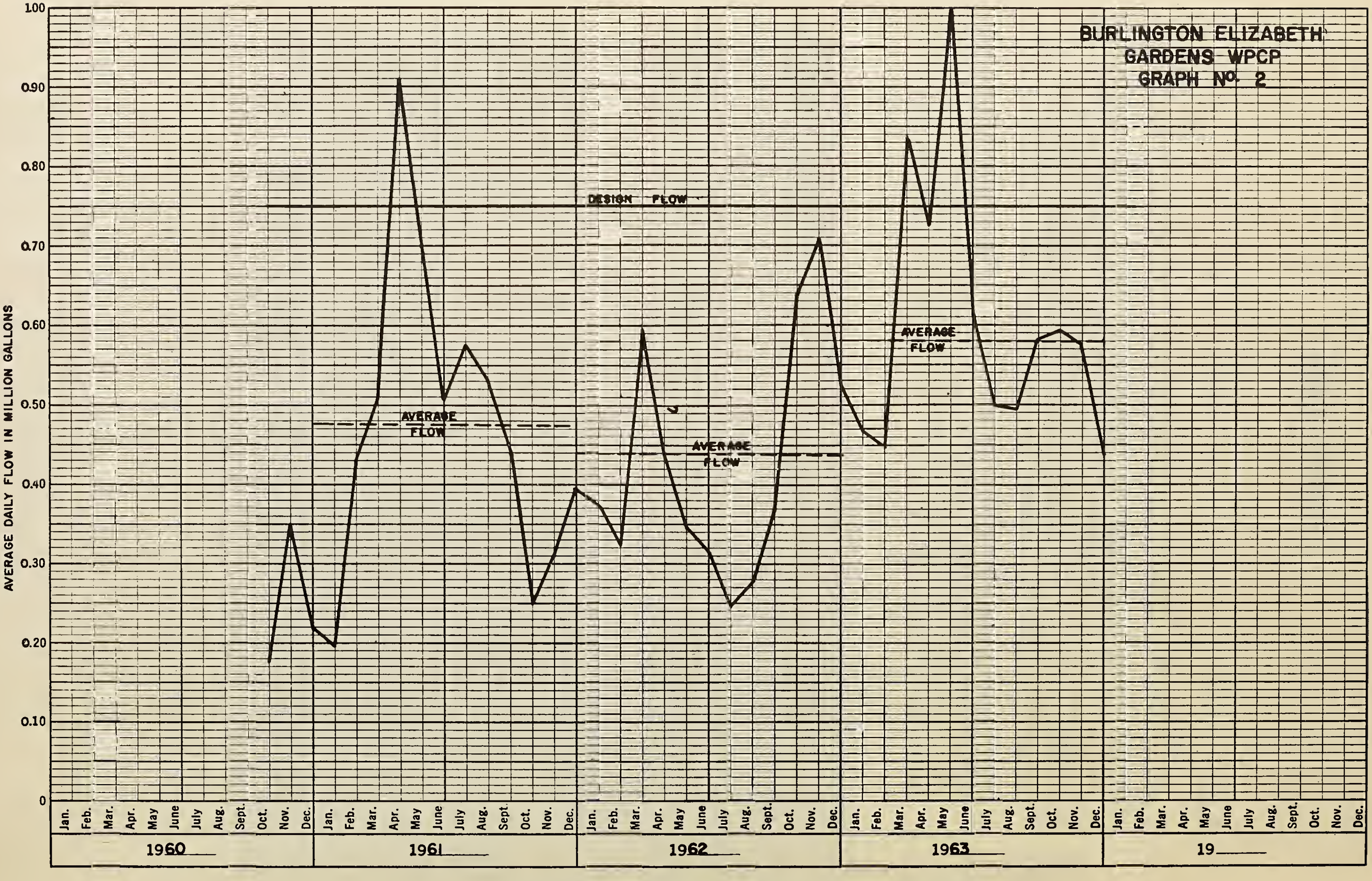
# Process Data

FLOW

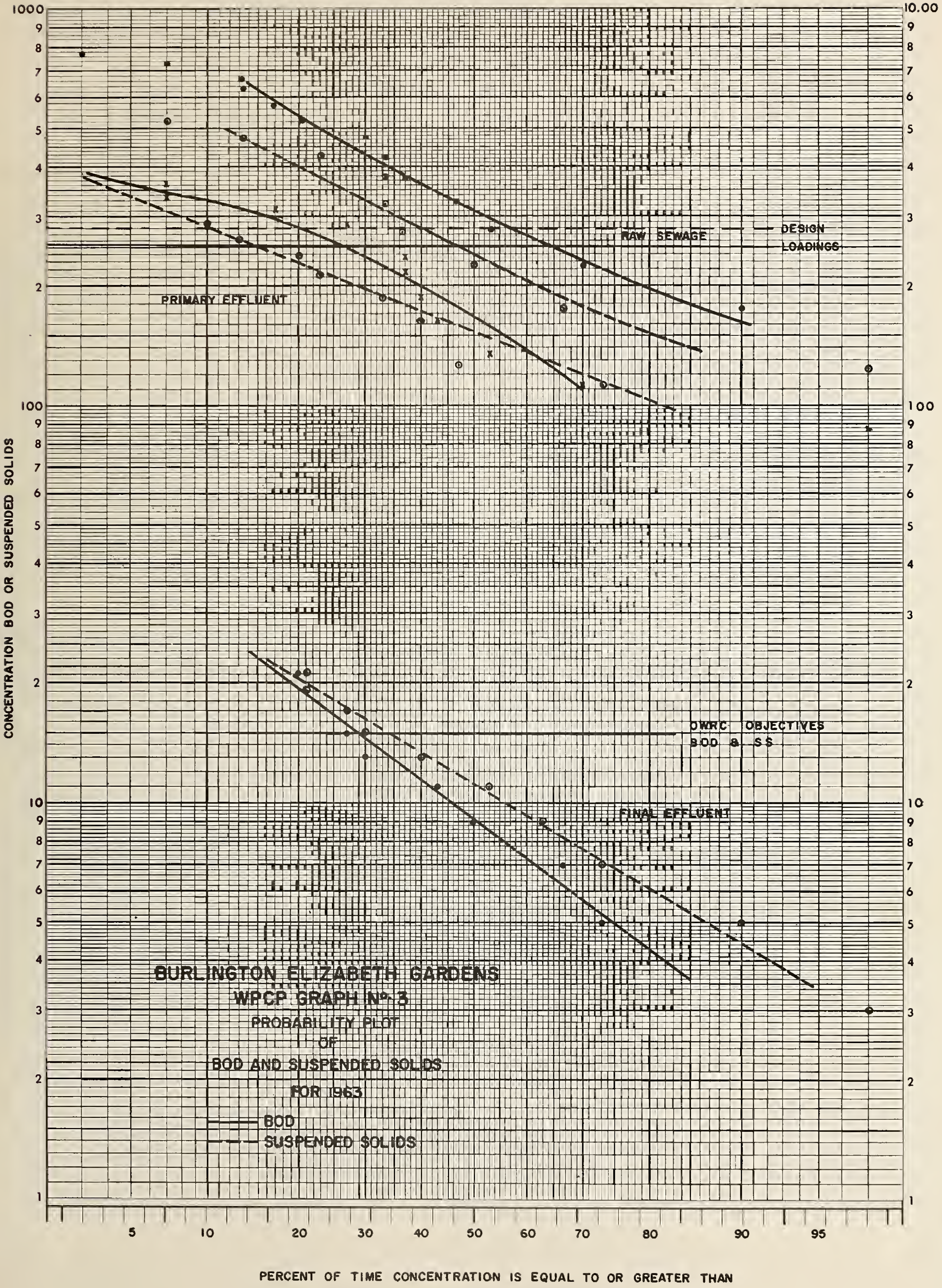
As may be seen from the two graphs of flow data, the 1963 average flow is considerably greater (about 12%) than the 1961 and about 15% than the 1962 flow. It would normally be expected that the flow would increase from year to year. The decrease for 1962 may be explained by a strike at a meat packing firm which is a major contributor of flow to the Elizabeth Gardens plant.

It should be noted that the average daily flow exceeded plant design 20% of the time in 1963.





AVERAGE DAILY FLOW – BURLINGTON ELIZABETH GARDENS


BURLINGTON ELIZABETH GARDENS
WPCP GRAPH Nº 3
PROBABILITY PLOT
OF
BOD AND SUSPENDED SOLIDS
FOR 1963
BOD
SUSPENDED SOLIDS
RAW SEWAGE
DESIGN
LOADINGS
PRIMARY EFFLUENT
OWRC OBJECTIVES
BOD & SS
FINAL EFFLUENT
CONCENTRATION BOD OR SUSPENDED SOLIDS
PERCENT OF TIME CONCENTRATION IS EQUAL TO OR GREATER THAN
1000
9
8
7
6
5
4
3
2
100
10
1
10.00
5
10
20
30
40
50
60
70
80
90
95

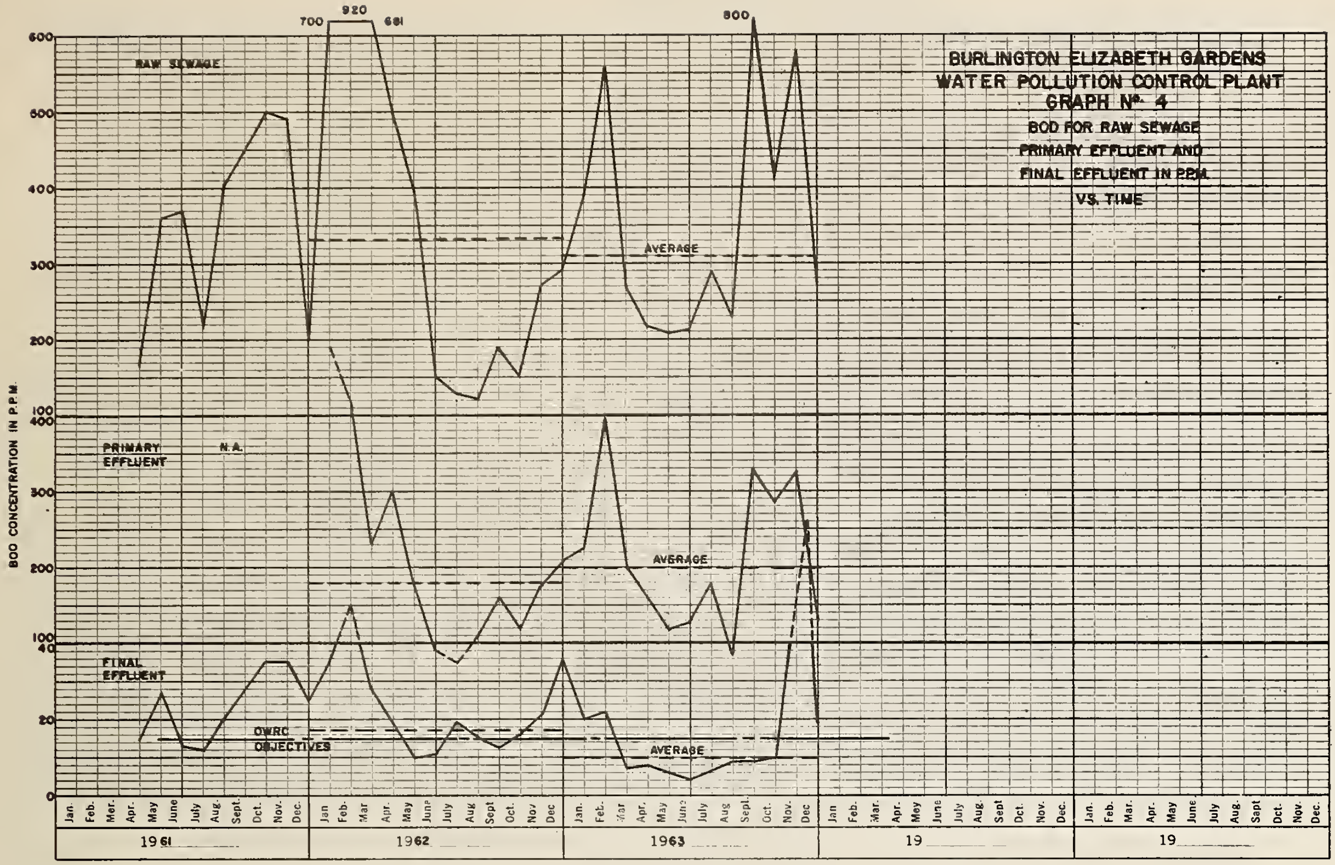
# GRIT, B.O.D AND S.S. REMOVAL

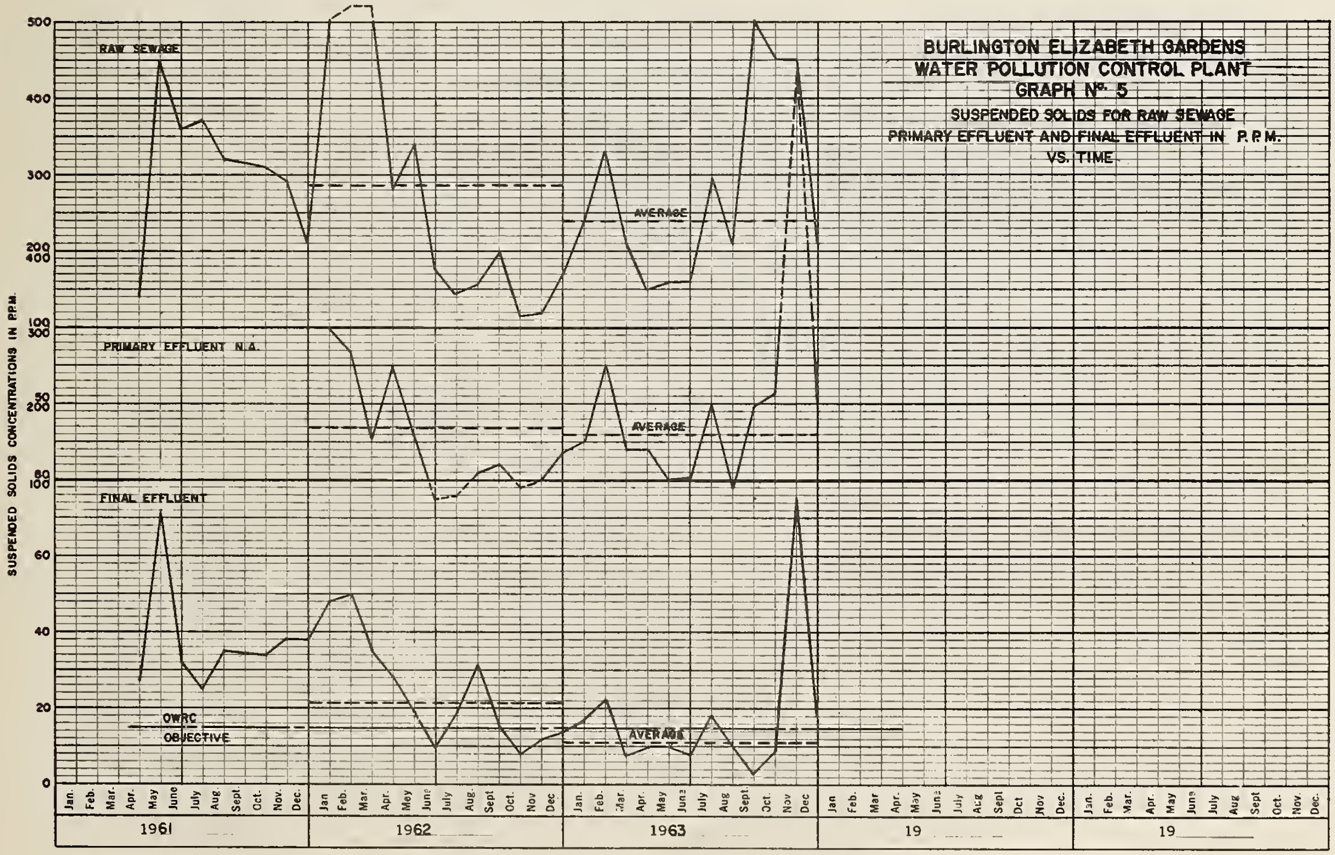
| MONTH | B. O. D. | | | | S. S. | | | | GRIT REMOVAL CU. FT. |
|---|---|---|---|---|---|---|---|---|---|
| | INFLUENT P.P.M. | EFFLUENT P.P.M. | % REDUCTION | TONS REMOVED | INFLUENT P.P.M. | EFFLUENT P.P.M. | % REDUCTION | TONS REMOVED | |
| JAN. | 391 | 2.0 | 95.0 | 26.93 | 240 | 17 | 93.0 | 18.01 | 48 |
| FEB. | 558 | 2.2 | 96.0 | 33.60 | 335 | 22 | 93.5 | 19.62 | 32 |
| MAR. | 268 | 7.0 | 97.5 | 33.74 | 213 | 8 | 96.0 | 26.50 | 68 |
| APR. | 215 | 8.0 | 96.0 | 22.45 | 148 | 10 | 93.0 | 14.97 | 78 |
| MAY | 208 | 6.5 | 97.0 | 31.53 | 160 | 10 | 93.5 | 23.46 | 59 |
| JUNE | 213 | 4.0 | 98.0 | 19.28 | 161 | 8 | 95.0 | 14.12 | 39 |
| JULY | 292 | 10.0 | 96.5 | 21.85 | 294 | 18 | 93.5 | 21.23 | 100 |
| AUG. | 228 | 9.0 | 96.0 | 16.73 | 214 | 10 | 95.5 | 25.58 | 74 |
| SEPT. | 800 | 9.2 | 99.0 | 68.96 | 515 | 3 | 99.5 | 41.15 | 70 |
| OCT. | 415 | 10.0 | 97.5 | 36.00 | 450 | 9 | 98.0 | 39.19 | 70 |
| NOV. | 580 | 7.2 | 87.5 | 43.66 | 449 | 75 | 83.0 | 32.15 | 72 |
| DEC. | 275 | 9.0 | 89.5 | 16.73 | 214 | 18 | 91.5 | 13.33 | 49 |
| TOTAL | | | | 371.46 | | | | 289.31 | 759 |
| AVG. | 370 | 16.0 | 95.5 | 30.95 | 283 | 17 | 94.0 | 24.10 | 63 |

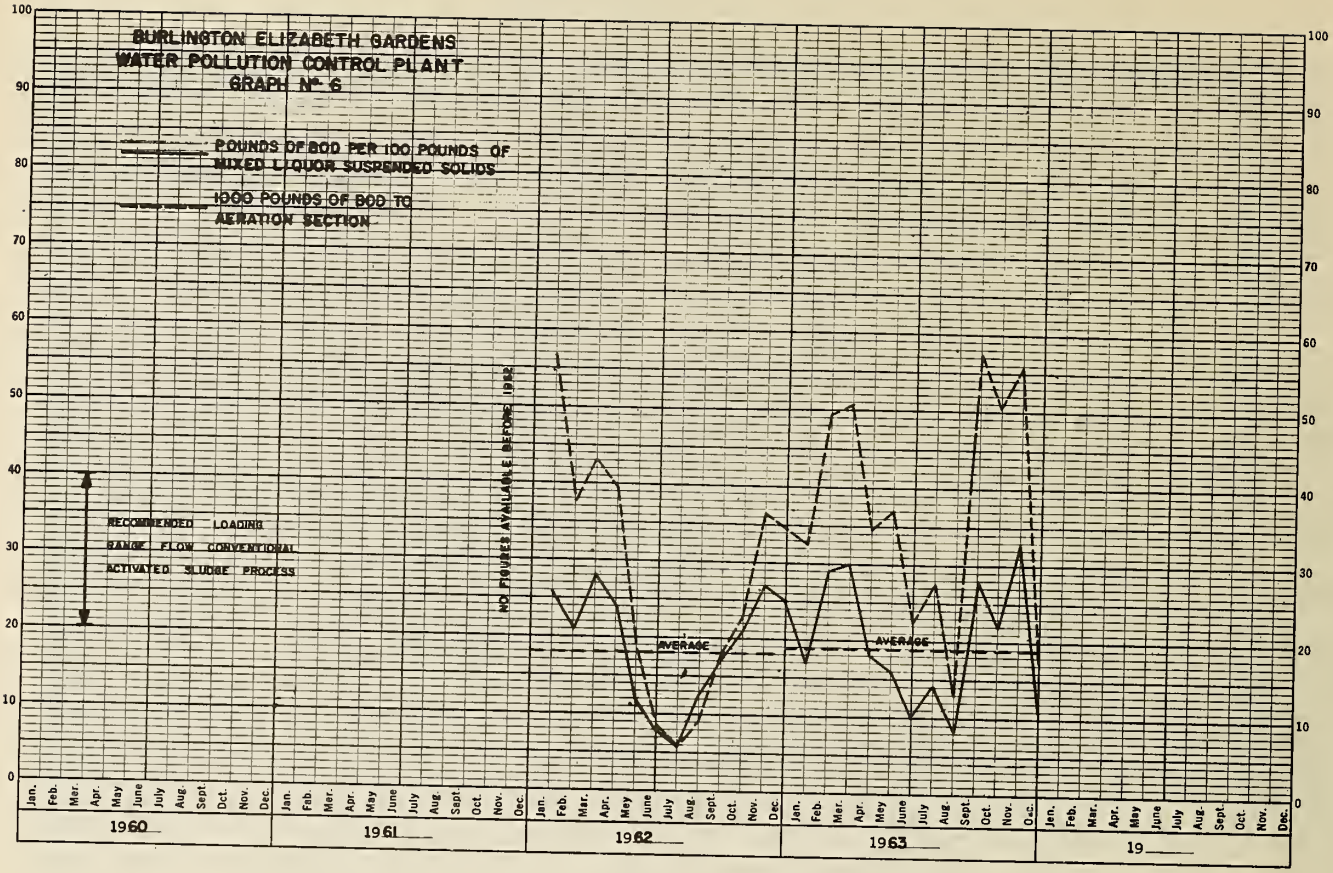
## COMMENTS

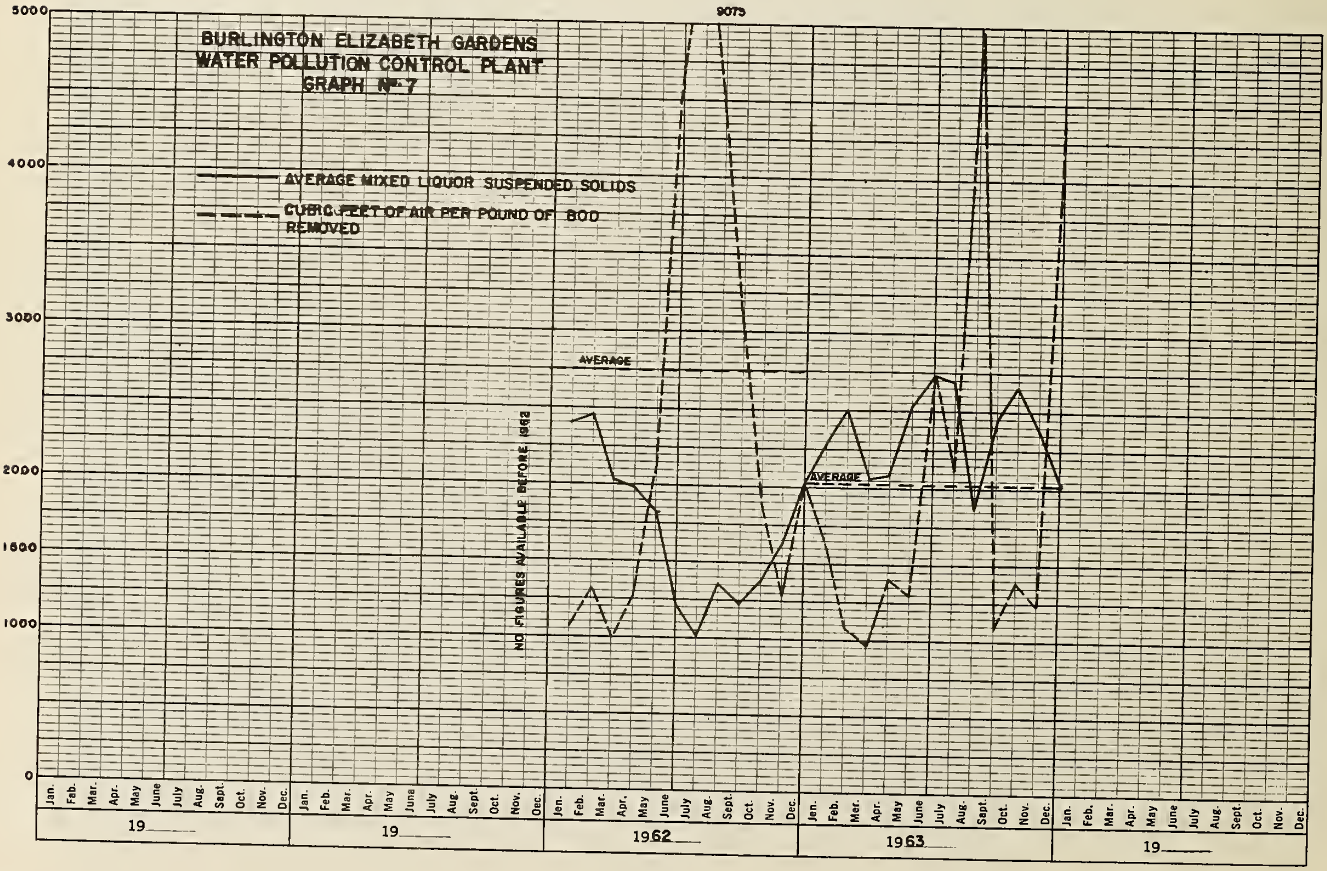
It may be seen from Graph Number 3 that the BOD and Suspended Solids concentrations entering the plant are considerably greater than the design estimates of 253 ppm and 280 ppm respectively. The design BOD concentration is exceeded 64% of the time and the design Suspended Solids concentration is exceed 40% of the time. This, in combination with the fact that the plant is hydraulically overloaded, points out considerable general overload of the plant.

It is therefore an indication of very efficient operation that the Ontario Water Resources Commission objective of 15 ppm of BOD and S S in the final effluent was exceeded only 30% of the time. It should also be noted from the chart "Grit BOD and SS Removal" that the average BOD and Suspended Solids reduction was 95.5% and 94% respectively.


BURLINGTON ELIZABETH GARDENS
WATER POLLUTION CONTROL PLANT
GRAPH Nº 4
BOD FOR RAW SEWAGE
PRIMARY EFFLUENT AND
FINAL EFFLUENT IN P.P.M.
VS. TIME
BOD CONCENTRATION IN P.P.M.
RAW SEWAGE
PRIMARY EFFLUENT
N.A.
FINAL EFFLUENT
OWRC OBJECTIVES
AVERAGE
AVERAGE
AVERAGE
700
920
681
800
600
500
400
300
200
100
400
300
200
100
40
20
0
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1961
1962
1963
19
19


BURLINGTON ELIZABETH GARDENS
WATER POLLUTION CONTROL PLANT
GRAPH Nº 5
SUSPENDED SOLIDS FOR RAW SEWAGE
PRIMARY EFFLUENT AND FINAL EFFLUENT IN P.P.M.
VS. TIME
SUSPENDED SOLIDS CONCENTRATIONS IN P.P.M.
RAW SEWAGE
PRIMARY EFFLUENT N.A.
FINAL EFFLUENT
OWRC OBJECTIVE
AVERAGE
AVERAGE
AVERAGE
500
400
300
200
400
100
300
50
200
80
100
60
40
20
0
Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.
1961
1962
1963
19
19


BURLINGTON ELIZABETH GARDENS
WATER POLLUTION CONTROL PLANT
GRAPH Nº 6
POUNDS OF BOD PER 100 POUNDS OF MIXED LIQUOR SUSPENDED SOLIDS
1000 POUNDS OF BOD TO AERATION SECTION
RECOMMENDED LOADING RANGE FLOW CONVENTIONAL ACTIVATED SLUDGE PROCESS
NO FIGURES AVAILABLE BEFORE 1962
AVERAGE
AVERAGE
100
90
80
70
60
50
40
30
20
10
0
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
1960
1961
1962
1963
19


BURLINGTON ELIZABETH GARDENS
WATER POLLUTION CONTROL PLANT
GRAPH Nº 7
AVERAGE MIXED LIQUOR SUSPENDED SOLIDS
CUBIC FEET OF AIR PER POUND OF BOD REMOVED
NO FIGURES AVAILABLE BEFORE 1962
9075
AVERAGE
AVERAGE
5000
4000
3000
2000
1500
1000
0
Jan.
Feb.
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
19
19
1962
1963
19

# AERATION SECTION

| MONTH | PRIM. EFFL B.O.D. P.P.M. | M.L.S.S. P.P.M. | LBS. B.O.D. PER 100 LBS. M. L. S. S. | CUBIC FEET AIR PER LB. B.O.D. REMOVED |
|---|---|---|---|---|
| JANUARY | 224 | 2295 | 17 | 1633 |
| FEBRUARY | 395 | 2506 | 29 | 1094 |
| MARCH | 197 | 2055 | 30 | 959 |
| APRIL | 160 | 2086 | 18 | 1400 |
| MAY | 118 | 2526 | 16 | 1300 |
| JUNE | 122 | 2734 | 10 | 2745 |
| JULY | 178 | 2689 | 14 | 2115 |
| AUGUST | 85 | 1868 | 8 | 4993 |
| SEPTEMBER | 330 | 2437 | 28 | 1084 |
| OCTOBER | 285 | 2655 | 22 | 1383 |
| NOVEMBER | 325 | 2372 | 33 | 1240 |
| DECEMBER | 130 | 2046 | 11 | 4380 |
| TOTAL | | | | |
| AVERAGE | 212 | 2272 | 20 | 2027 |

## COMMENTS

The operation of the aeration section of the Water Pollution Control Plant is an attempt to regulate the Mixed Liquor Suspended Solids (Column 2) at a concentration determined by the primary effluent BOD concentration (Column 1), in order to give a "pounds of BOD per 100 pounds of Mixed Liquor Suspended Solids" (Column 3) of between normally 20 to 40. This figure may vary somewhat in an abnormally loaded plant, as is the case here.

Normally a plant should operate using 1000-1500 cubic feet of air per pound of BOD removed.

# DIGESTER OPERATION

| MONTH | SLUDGE TO DIGESTERS | | | % VOL. MAT IN DIGESTED SLUDGE | GAS PRODUCED 1000'S CU. FT. | SLUDGE FROM DIGESTER 1000'S GALS |
|---|---|---|---|---|---|---|
| | 1000'S GALLONS | % SOLIDS | % VOL. MAT. | | | |
| JAN. | 47.89 | | | | | 94.35 |
| FEB. | 45.24 | | | | | 59.30 |
| MAR. | 46.80 | | | | | 63.52 |
| APR. | 79.56 | | | | | 78.18 |
| MAY. | 86.19 | | | | | 86.94 |
| JUNE | 95.16 | | | | | 14.21 |
| JULY | 117.39 | | | | | 12.94 |
| AUG. | 90.48 | | | | | 10.81 |
| SEPT. | 156.39 | | | | | 132.09 |
| OCT. | 227.76 | | | | | 211.61 |
| NOV. | 237.51 | | | | | 117.26 |
| DEC. | 174.72 | | | | | 137.98 |
| TOTAL | 1405.09 | | | | | 101.919 |
| AVG. | 117.09 | | | | | 84.93 |

## COMMENTS

The reduction in volume of sludge by digestion and supernatant return was 37%.

## CHLORINATION

| MONTH | PLANT FLOW (MG) | POUNDS CHLORINE | DOSAGE RATE (P.P.M) |
|---|---|---|---|
| JANUARY | .468 | 15 | 3.2 |
| FEBRUARY | .448 | 17 | 3.5 |
| MARCH | .834 | 16 | 1.9 |
| APRIL | .723 | 16 | 2.2 |
| MAY | 1.009 | 18 | 1.8 |
| JUNE | .615 | 14 | 2.3 |
| JULY | .500 | 22 | 4.4 |
| AUGUST | .493 | 16 | 3.2 |
| SEPTEMBER | .581 | 21 | 3.6 |
| OCTOBER | .592 | 18 | 3.0 |
| NOVEMBER | .573 | 22 | 3.8 |
| DECEMBER | .439 | 15 | 3.4 |
| TOTAL | | 210 | |
| AVERAGE | .606 | 19 | 3.0 |

### COMMENTS

Throughout the year a minimum chlorine residual of 0.5 ppm was maintained, as per the requirements of the Division of Sanitary Engineering, in order to insure destruction of pathogenic bacteria.

# 1963

**PLANT**

# Total Operating Costs

**MONTHLY**

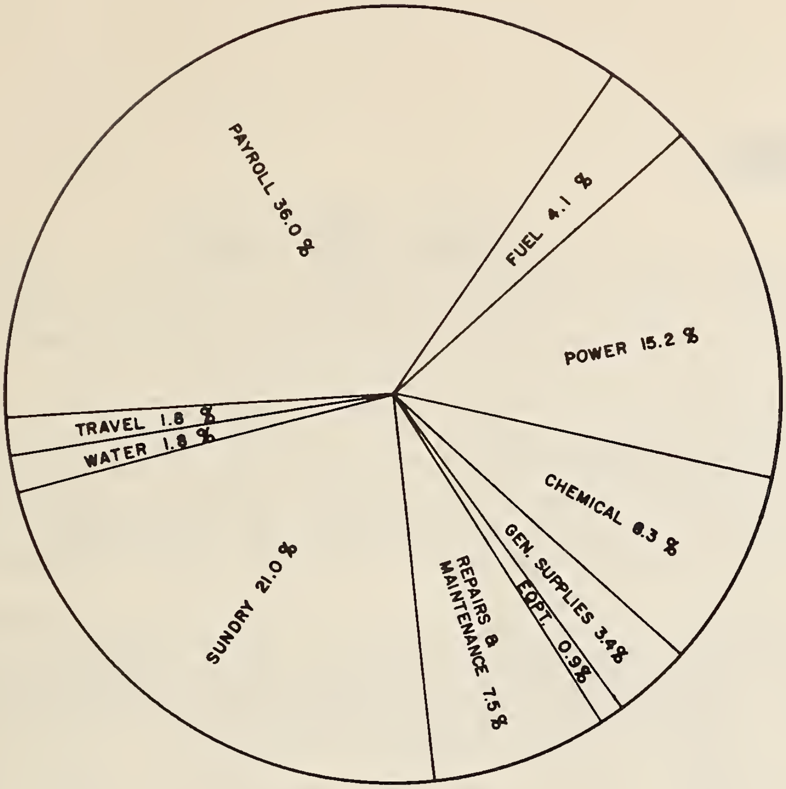
| MONTH | TOTAL EXPENDITURE | PAYROLL | CASUAL PAYROLL | FUEL | POWER | CHEMICAL | GENERAL SUPPLIES | EQUIPMENT | REPAIRS & MAINTENANCE | SUNDRY | WATER |
|---|---|---|---|---|---|---|---|---|---|---|---|
| JAN | 1350 | 761 | - | 149 | 315 | | 52 | | 18 | 5 | - |
| FEB | 2330 | 742 | - | 256 | 347 | 224 | 368 | | | 280 | 74 |
| MARCH | 1737 | 724 | - | 145 | 360 | - | (26) | - | - | 509 | - |
| APRIL | 1249 | 716 | - | 148 | 427 | (350) | 15 | - | - | 269 | - |
| MAY | 2015 | 716 | - | - | 324 | - | 44 | - | 96 | 733 | - |
| JUNE | 1948 | 733 | - | - | 330 | 232 | 70 | - | 117 | 367 | 99 |
| JULY | 2865 | 1078 | - | 147 | 320 | 617 | 50 | 145 | 187 | 276 | - |
| AUG | 2234 | 716 | - | - | 313 | (26) | 37 | 82 | 211 | 797 | 103 |
| SEPT | 2202 | 723 | - | - | 315 | - | 168 | - | 432 | 540 | - |
| OCT | 3229 | 720 | - | 143 | 304 | 812 | 16 | - | 348 | 689 | 107 |
| NOV | 1178 | 716 | - | - | 323 | (157) | 50 | - | 170 | 17 | - |
| DEC | 4273 | 1074 | - | 72 | 315 | 816 | 49 | - | 364 | 1469 | 98 |
| TOTAL | 26010 | 9419 | - | 1061 | 3994 | 2168 | 893 | 227 | 1943 | 5951 | 480 |

**PLANT**

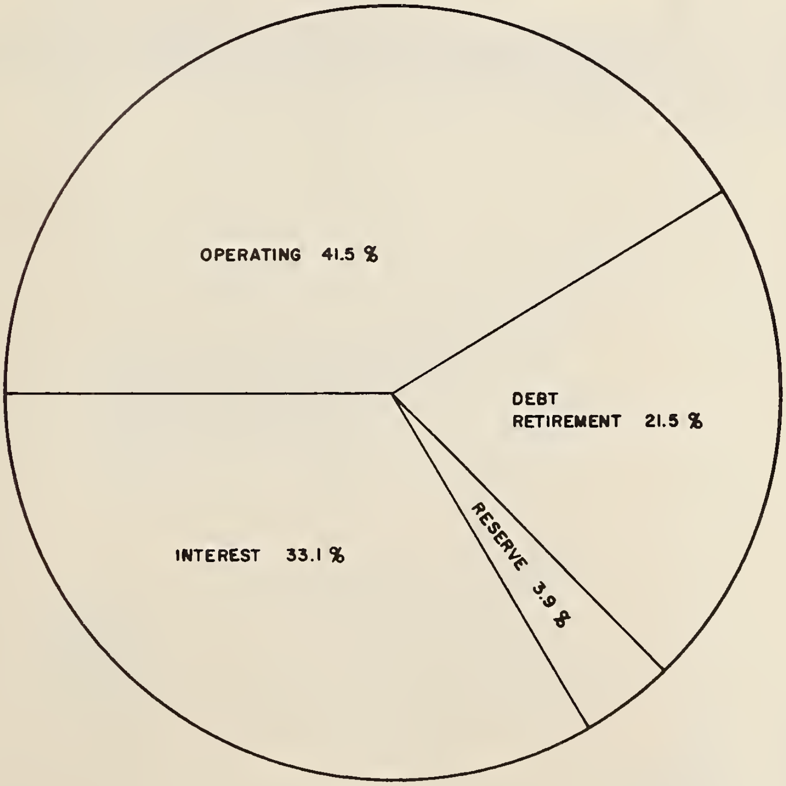
**YEARLY**

| YEAR | M.G. TREATED | TOTAL COST | COST PER MILLION GALLONS | COST PER CAPITA PER YEAR |
|---|---|---|---|---|
| 1961 | 172.733 | $ 23,541 | $136.25 | $ 83.72 |
| 1962 | 156.921 | 21,800 | 139.00 | 80.01 |
| 1963 | 221.120 | 26,010 | 120.50 | 67.50 |
| | | | | |

## OPERATING COSTS 1963



## TOTAL ANNUAL COSTS 1963



# SUMMARY

This report has given in detail significant data on the operation of the various treatment units at the Burlington Elizabeth Gardens Water Pollution Control Plant.

The effluent being discharged to Lake Ontario, has been of excellent quality, with very few BOD and Suspended Solids concentrations greater than the OWRC requirement of 15 ppm. It is expected that the effluent quality will deteriorate in 1964 until the full operation of the Skyway plant will take some of the load from the Elizabeth Gardens plant.

The influent in the past has varied greatly in its BOD and Suspended Solids concentrations, due to fluctuations in the effluent from the large meat packing concern in the area. On the average the strength of sewage is extremely high.

The operation costs have remained more or less constant for the past few years, as would be expected with a plant of this particular age.   It is not expected that operating costs will vary greatly for the next few years.

During the past year the plant staff has operated and maintained a clean, attractive and efficient plant for the Town of Burlington.

# Total 1963 Costs

The total cost to the municipality during 1963 was as follows:

| | |
|---|---|
| Operation ...................... | $26,609.75 |
| Debt Retirement ................ | $13,887.00 |
| Reserve ........................ | $ 2,493.00 |
| Interest ....................... | $21,563.16 |
| TOTAL | $64,550.91 |

Note: The amount in the Reserve for Contingencies account as of December 31st, 1964 was $7,410.93.

TD227/B87/E45/W38/1964/MOE
Ontario Water Resources Co
Burlington Elizabeth
Gardens water asib
c.1 a aa

Environment Ontario
M9P 3V6
Canada

7
56
B875
1963

Burlington Elizabeth Gardens :
water pollution control plant.
81567

*Division of Plant Operations*

**ONTARIO WATER RESOURCES COMMISSION**
801 BAY ST. TORONTO 5